

REMARKS

Claims 22-23, 26-30, 36, 38-40 and 44 have been amended. Claims 22-44 are presently pending.

The Examiner is thanked for the courtesies extended during the Examiner interview conducted on August 28, 2007. As discussed during the interview and set forth in the Examiner Interview Summary, the Examiner agreed to withdraw the objection that the amendment filed March 26, 2007 introduces new matter to the specification, and the rejection of claims 23 and 44 under 35 U.S.C. § 112, first paragraph, as including new subject matter not supported by the disclosure.

In view of such amendments and the following remarks, reconsideration and allowance of the claims, as presently presented, are respectfully requested.

EXAMINER'S ACTION

The 35 U.S.C. § 102 Rejections

Claims 22-43 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,996,550 ("Wang *et al.*").

In view of the discussions conducted with the Examiner during the interview, claim 22 has been amended to clarify that, in the claimed method for designing experiments, the meta layer module generates evaluation data based on the meta layer module's evaluating "experimentally determined experiment *result* data" (emphasis added) of a first experiment. The evaluation of experimentally determined experiment result data is described in the original specification at page 3, lines 9-11 (clean specification at paragraph [0012]). In addition, claim 22 recites that the evaluation data influences processing of the experimentally determined experiment result data of the first experiment at a data-driven optimizer, such that the optimizer can rapidly converge

upon an optimized experiment design. (See clean specification, for example, at paragraphs [0038], [0039] and [0041]).

As discussed during the Examiner interview, Wang *et al.* performs an optimization using configurations defined from a set of parameters (e.g., materials having desired properties) and a set of constraints on physical operations of an experimental device. (See Wang *et al.* at Col. 4, ln. 46-56 and Col. 26, ln. 1-60). The Wang *et al.* optimization, however, does not account for knowledge acquired from prior experimentation. In contrast to Wang *et al.*, the meta layer module as required by claim 22 evaluates information that does not concern how the experiment is performed, which would constitute a constraint or parameter as described in Wang *et al.*, but rather evaluates the results of an experiment, in other words, experimentally determined experiment result data. The experimentally determined experiment result data required by claim 22, such as, for example, the yield of a particular experiment, is not a constraint or a parameter as discussed in Wang *et al.*, and is evaluated according to the claimed invention to generate evaluation data used to influence the optimizer. For example, the evaluation of the yield results determined from experiments can include filtering of the yield data, such that experiments that give good yield results are weighted more heavily in the optimization than experiments giving bad yield results. (See original specification at page 6, lines 15-23 and clean specification at paragraph [0022]). Nowhere does Wang *et al.* teach or suggest generating evaluation data at a meta layer module based on the meta layer module's evaluation of experimentally determined experiment result data, which constitutes prior experimentation knowledge, and then using the evaluation data to influence (tune) optimization processing of the

experimentally determined experiment result data at the optimizer, as required by claim 22.

Accordingly, claim 22 is patentable over Wang *et al.*

In addition, amended independent claim 36, which claims a system for designing experiments having limitations corresponding to those of claim 22 discussed above, is patentable over Wang *et al.* for the same reasons as set forth above with respect to claim 22.

Further, claims 23-35 and 37-44, which depend directly or indirectly upon claims 22 or 36, are also patentable over Wang *et al.* for the same reasons as set forth above with respect to claim 22 and because of the further restrictions they add.

Withdrawal of the Section 102 rejections is, therefore, respectfully requested.


CONCLUSION

For the foregoing reasons, it is believed that all of the claims, as presently presented, are patentable.

The Examiner is invited to telephone the undersigned if it is believed that further amendment and/or discussion would help to advance the prosecution of the present application.

Reconsideration and allowance of claims 22-44 are, therefore, respectfully requested.

Respectfully submitted,



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